



COURSE DESCRIPTION CARD - SYLLABUS

Course name

State Safety Program Civil Aviation

Course

Field of study

Aviation and cosmonautics

Area of study (specialization)

Civil Aviation

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

2/2

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

0

Other (e.g. online)

0

Tutorials

15

Projects/seminars

0

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

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Responsible for the course/lecturer:

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Prerequisites

Knowledge: The student has a basic knowledge of aviation law, organization in civil aviation, as well as quality management systems. The student knows the basics of mathematics, with particular emphasis on the theory of probability.

Skills: The student is able to analyze complex processes: identify and describe their component parts.

Social competences: The student is able to cooperate in a group, assuming various roles in it. The student is able to determine the priorities important in solving the tasks set before him. The student shows independence in solving problems, acquiring and improving the acquired knowledge and skills.



Course objective

To familiarize students with issues related to aviation safety management - both on the part of the company and the aviation authority. Ability to develop and apply risk management methods

Course-related learning outcomes

Knowledge

1. Student has extended knowledge necessary to understand the profile subjects and specialist knowledge about the construction, methods of construction, manufacturing, operation, air traffic management, safety systems, impact on the economy, society and the environment in the field of aviation and aerospace for selected specialties: 1. Engineering Aviation, 2. Space Engineering, 3. Civil Aviation, 4. Virtual Engineering in Aeronautics
2. Student has detailed and structured knowledge in the field of the use of air technical facilities for the transport of passengers, goods, dangerous goods, as well as in the management of air operations and airports
3. Student has basic knowledge of law, in particular civil aviation law, copyright and industrial property protection law and its influence on the development of technology, can use patent information resources

Skills

1. Student can communicate using various techniques in the professional and other environments, using the formal notation of construction, technical drawing, concepts and definitions of the field of study studied
2. Student has the ability to self-educate with the use of modern teaching tools, such as remote lectures, websites and databases, teaching programs, e-books
3. Student can obtain information from literature, the Internet, databases and other sources. Can integrate the obtained information, interpret and draw conclusions from it, and create and justify opinions
4. Student can develop a safety instruction for an on-board device, machine or technical flying object under specific environmental conditions

Social competences

1. Student understands the need for lifelong learning; can inspire and organize the learning process of other people
2. Student is ready to critically evaluate his knowledge and received content, recognize the importance of knowledge in solving cognitive and practical problems, and consult experts in the event of difficulties with solving the problem on his own
3. Student is able to interact and work in a group, assuming various roles in it



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: exam covering the issues discussed in class.

Classes: a final test covering the issues discussed during classes.

Programme content

LECTURE:

1. Introduction to SMS: safety and safety management (definitions, importance of the system), evolution of aviation safety management (technical, human, cultural, organizational factor), examples, literature (J. Reason, S. Dekiker, K. Hotlinger)
2. Legal environment and safety programs: legal regulations in the field of aviation safety (certification of aviation activities, supervision over aviation organizations, SMS as an element of aviation activity certification), legal bases of SMS - international part of ICAO (Annex 19, SMM ICAO Doc 9854), basics legal SMS European part of EASA (EASA system, SMS in terms of EASA, PART ORA, ARA, ADR, AR), legal basis SMS - national part of CAA
3. Safety programs: World Aviation Safety Plan (GASP ICAO), European Aviation Safety Program (EPAS), National Aviation Safety Program (KPBwLC), National Safety Plan
4. Elements of SMS in an aviation organization: the purpose of SMS functioning in an aviation organization, safety policy and objectives, responsibility for safety, personnel, structure and documentation of SMS, safety management - introduction, ensuring safety - introduction, safety promotion
5. Safety management and assurance: risk management - basic concepts, hazard identification, risk assessment and mitigation, change management, safety indicators, safety audits and reviews, tools supporting risk management and assurance (BowTie, CBZ and ADREP nomenclature, ICAO Gap Analysis / SMS Evaluation Tool EASA)
6. Reporting and investigation of aviation occurrences: ICAO and EU regulations (Annex 13, EU Regulation No. 996/2010 and 376/2014, occurrence reporting according to PART), reporting of accidents and serious incidents, relations with SCAAI, Aviation Accident Reporting Systems in the organization (obligatory, confidential, anonymous, voluntary), safety investigation in the organization, just culture issues
7. SMS environment: compliance monitoring (CMM), emergency action plan (ERP), human factor, elements of aviation psychology (CISM)

EXERCISES:

1. Identification of sources of threats



2. Risk risk assessment
3. Implementation of the risk risk assessment in the selected area of analysis
4. Safety indicators
5. Audits and safety reviews
6. Tools supporting risk management and assurance (BowTie, CBZ and ADREP nomenclature, Gap Analysis ICAO / SMS Evaluation Tool EASA)

Teaching methods

Informative (conventional) lecture (providing information in a structured way) - may be of a course (introductory) or monographic (specialist) character

The exercise method (subject exercises, practice exercises) - in the form of auditorium exercises (application of the acquired knowledge in practice - may take various forms: solving cognitive tasks or training psychomotor skills; transforming a conscious activity into a habit through repetition)

Bibliography

Basic

1. Prawo i procedury lotnicze / Henryk Jafernik, Radosław Fellner, Gliwice, 2015
2. Aneks 13 ICAO
3. Bezpieczeństwo lotnictwa cywilnego : aspekty współpracy międzynarodowej / Marian Bujnowski ; Fundacja Studiów Międzynarodowych - Foundation of International Studies, Warszawa : Wydawnictwo Naukowe SCHOLAR, 2016.
4. Ustawa Prawo Lotnicze.
5. Safety Management Manual

Additional

1. Zarządzanie ruchem lotniczym w przestrzeni powietrznej RP, WLOP, Warszawa 2002
2. Compa T., Zarządzanie przestrzenią powietrzną, AON, Warszawa



Breakdown of average student's workload

	Hours	ECTS
Total workload	68	2,0
Classes requiring direct contact with the teacher	51	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	21	1,0

¹ delete or add other activities as appropriate